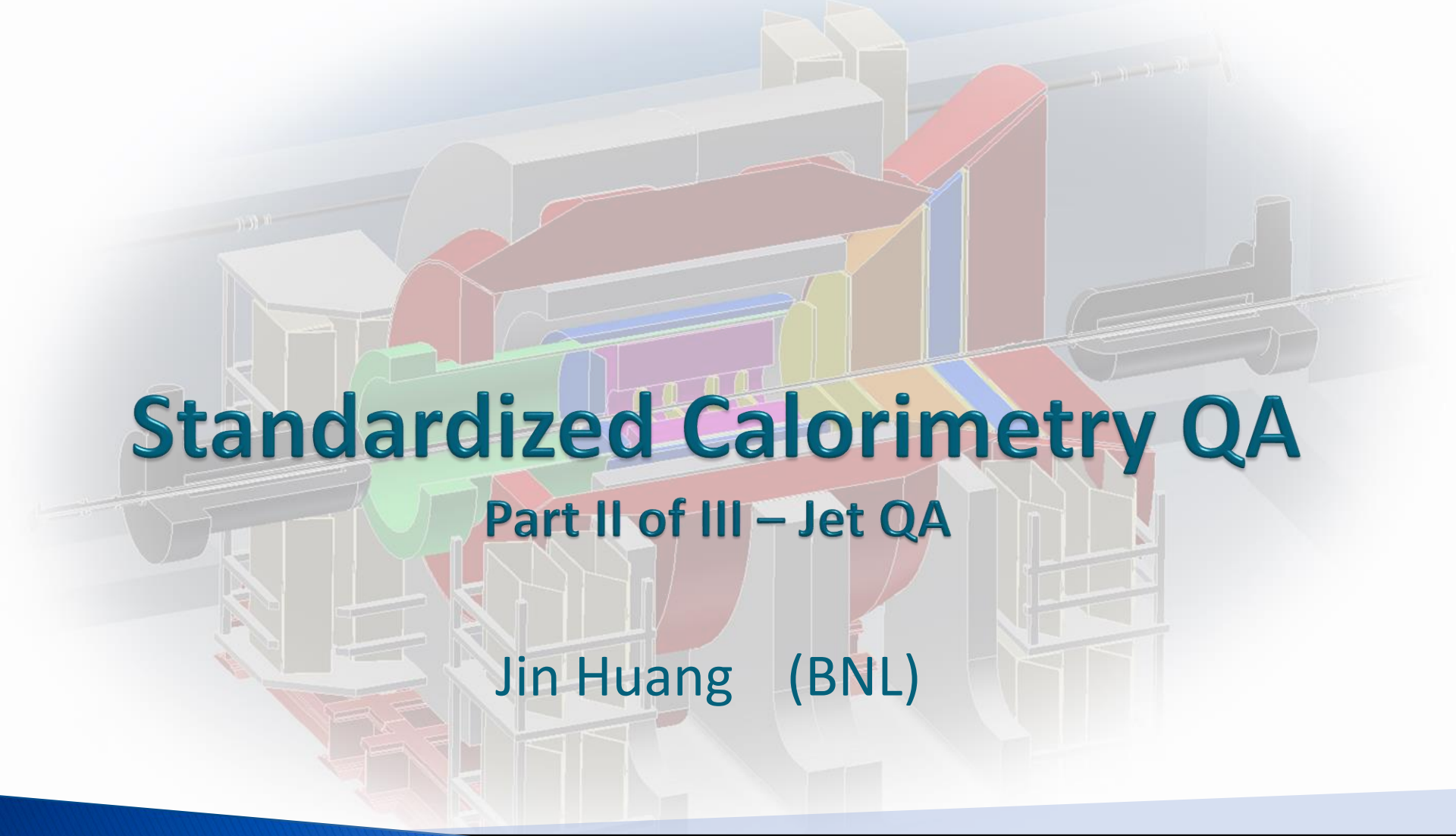


Standardized Calorimetry QA

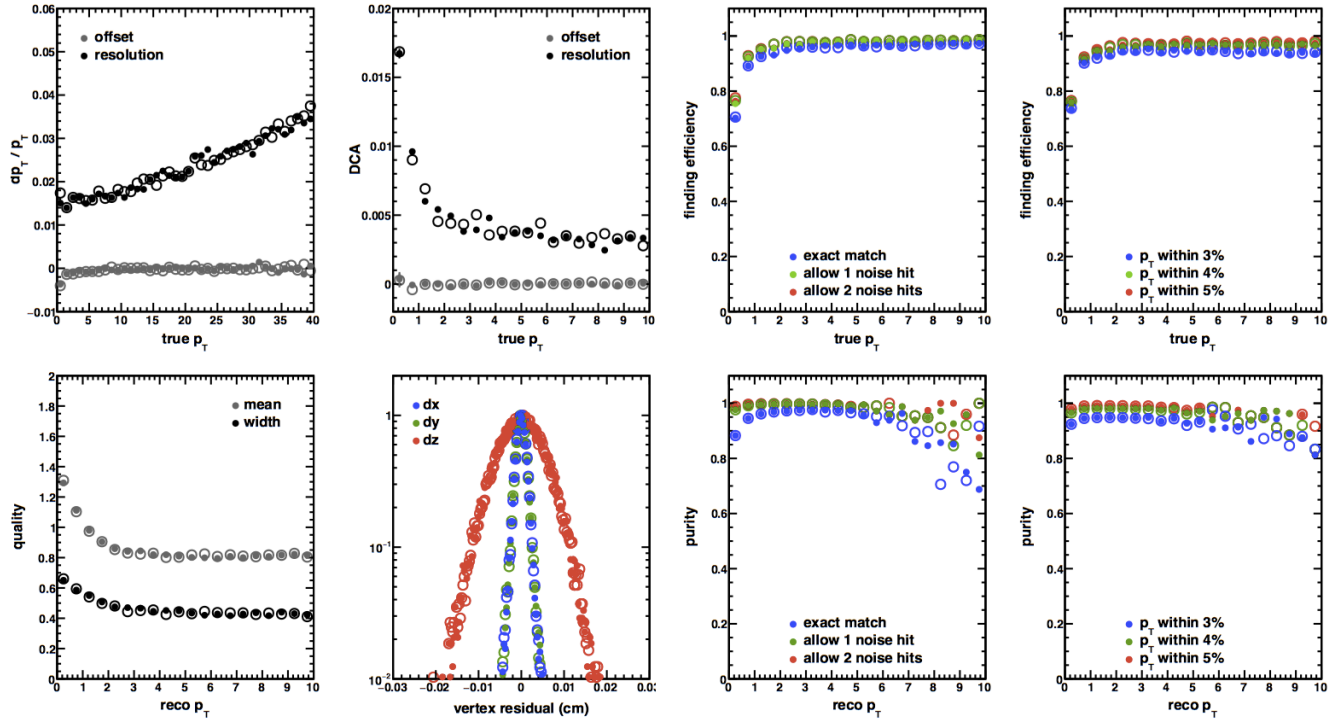
Part II of III – Jet QA

Jin Huang (BNL)

Introduction

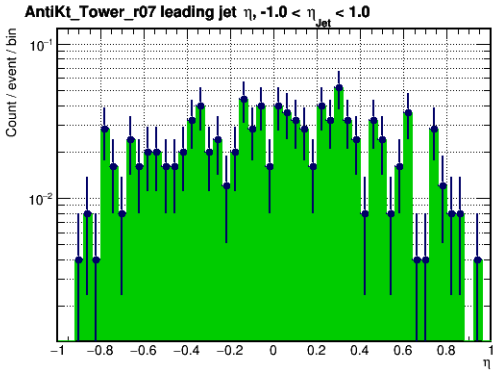
- Today's discovery is tomorrow's calibration
- We need a standardized module to quickly check calorimetry performance, similar to that of tracking check from Mike
- Connected to plan on implementing QA history for ANA builds and new code submissions.
- Planning three QA modules 1) each of three subsystems 2) tracking + three calorimeter 3) jets.
- First of the three stage merged via pull request https://github.com/sPHENIX-Collaboration/coresoftware/pull/104
- This talk focus on next one on jet: https://github.com/sPHENIX-Collaboration/coresoftware/pull/105 looking for suggestions before formalize it.

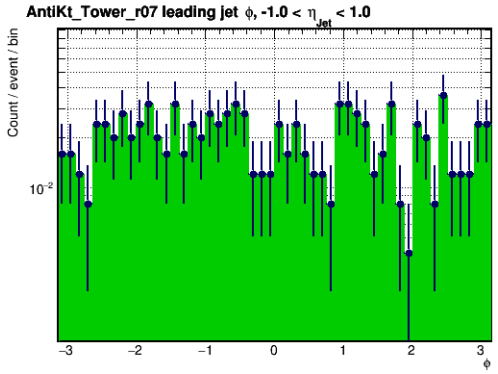
Standardized tracking check from Mike: https://github.com/sPHENIX-Collaboration/coresoftware/pull/89

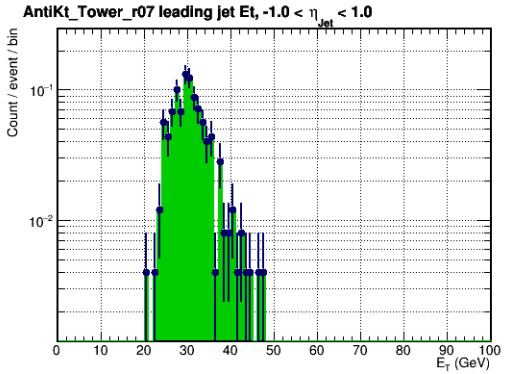


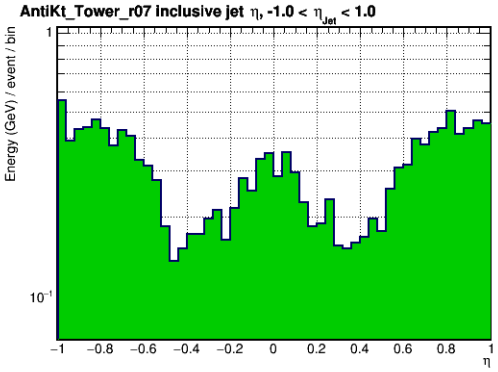
Reconstructed tower jet spectrum

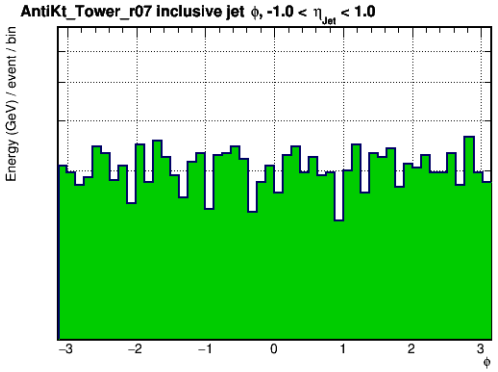
- Pythia8 200pp, s>25GeV, truth jet trigger E>30GeV
- Use itself as reference for now....

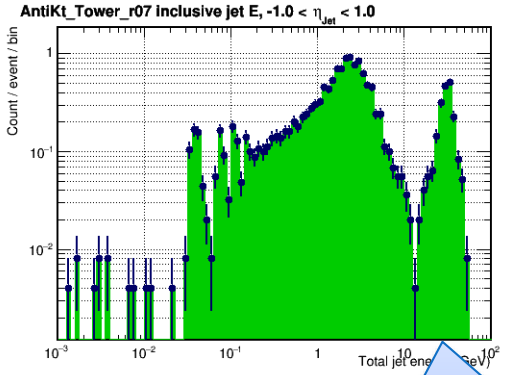








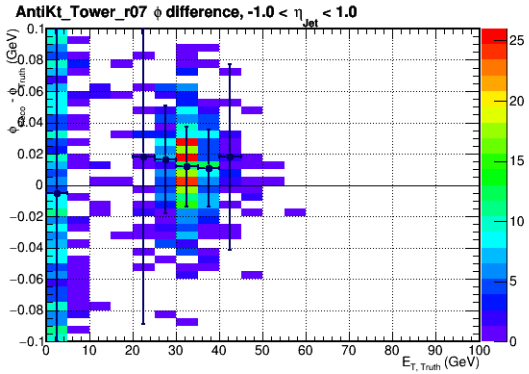


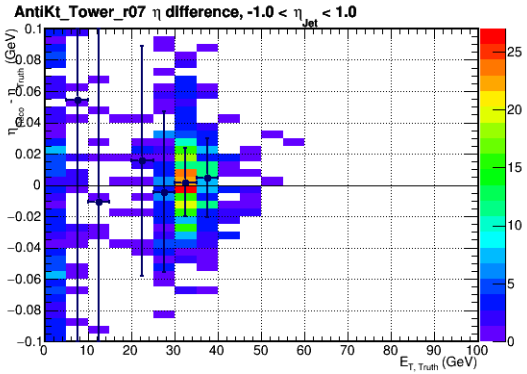


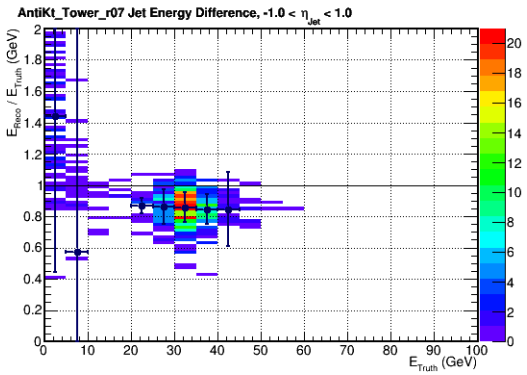
Pythia trigger threshold, 30GeV

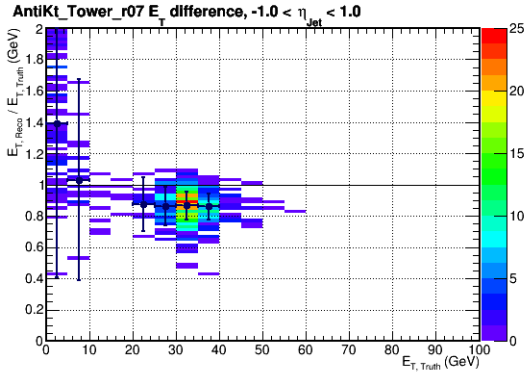
Truth Matching (still need statistics)

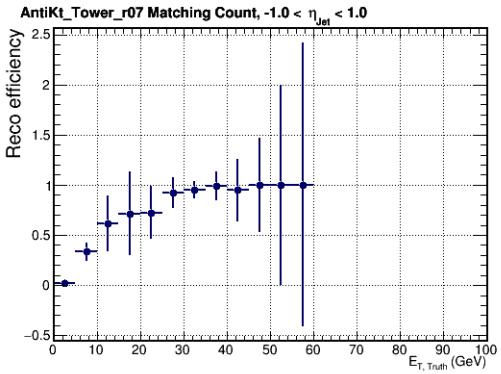
- Pythia8 200pp, s>25GeV, truth jet trigger E>30GeV
- Use itself as reference for now....

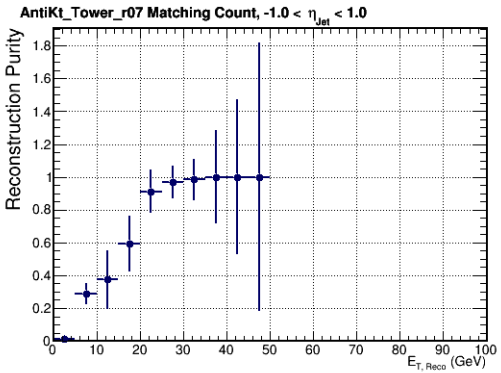












Extra information

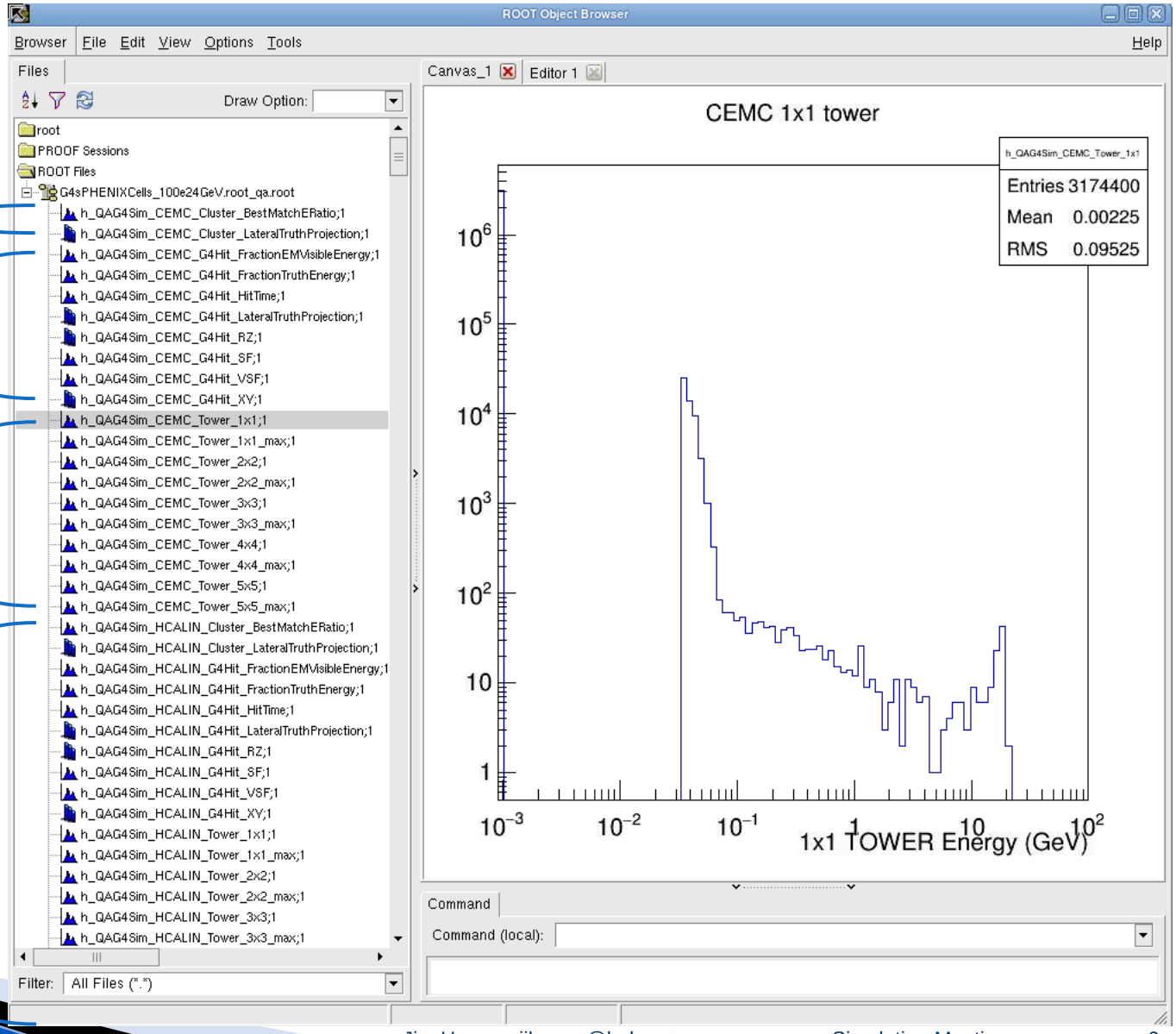
QA histogram overview

CEMC/Clusters

CEMC/Geant4 checks

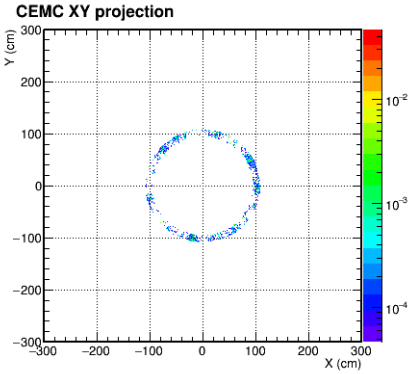
CEMC/Towers

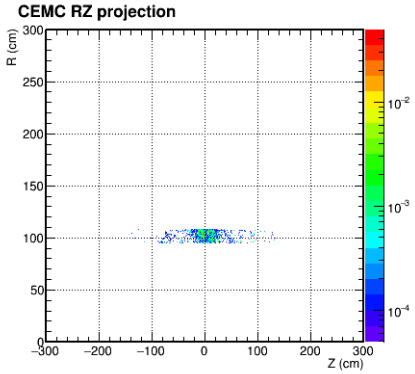
HCALIN/HCALOUT/...

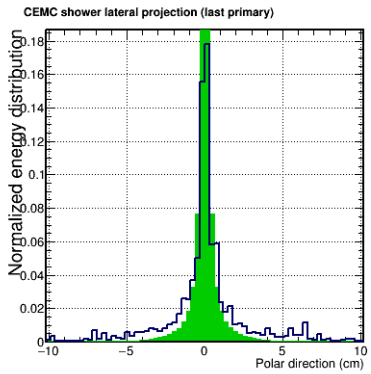


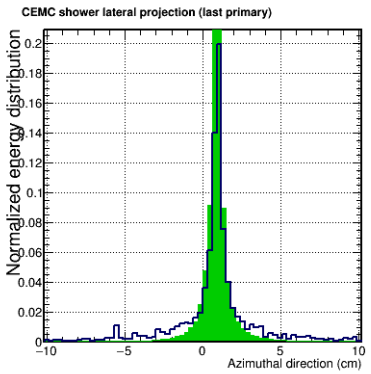
CEMC example

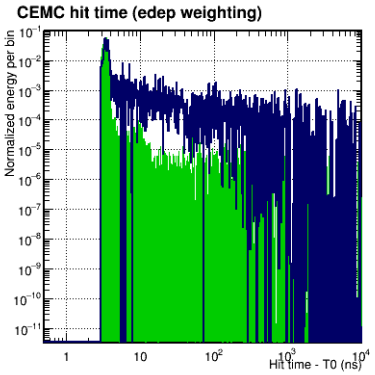
- 24GeV pi- simulation in inspection
- 24GeV e- simulation as reference

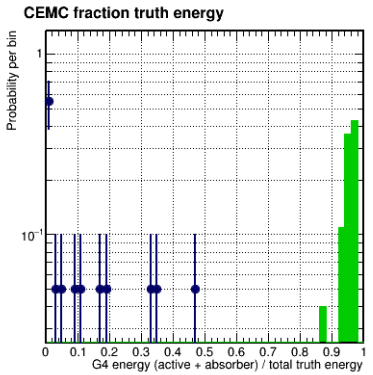


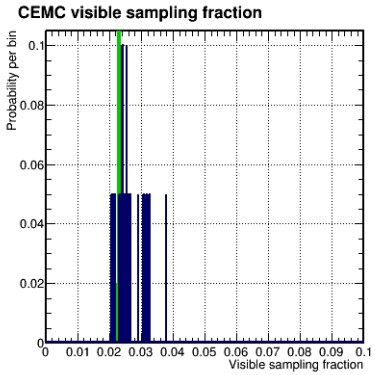


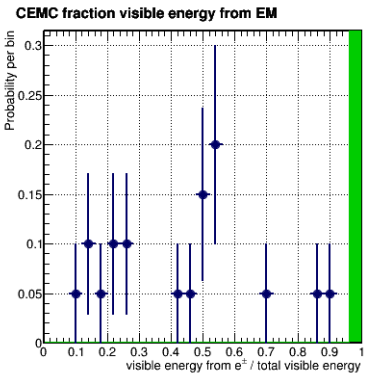






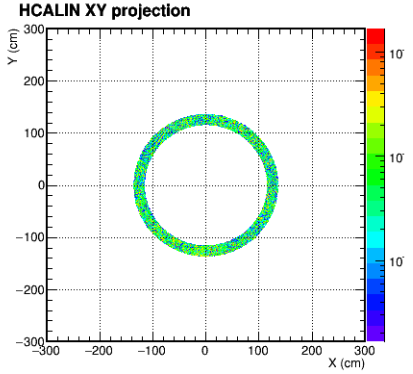


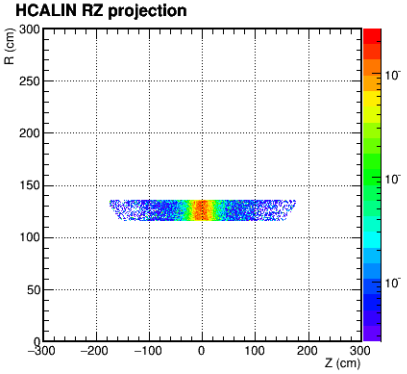


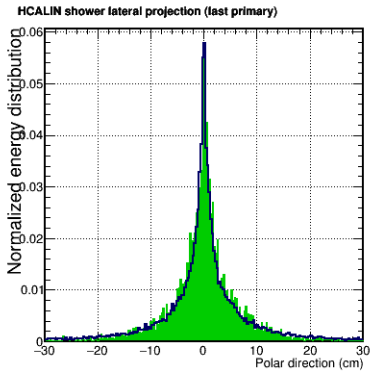


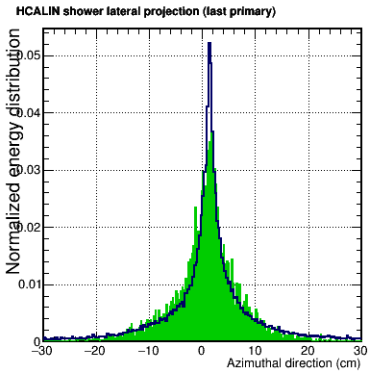
HCALIN

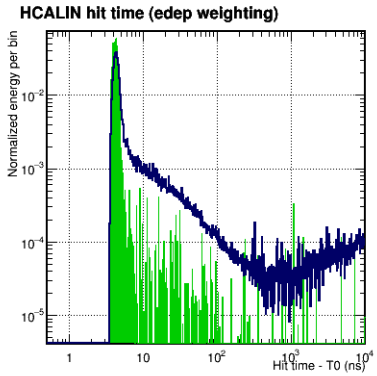
- 24GeV pi- simulation in inspection
- 24GeV e- simulation as reference

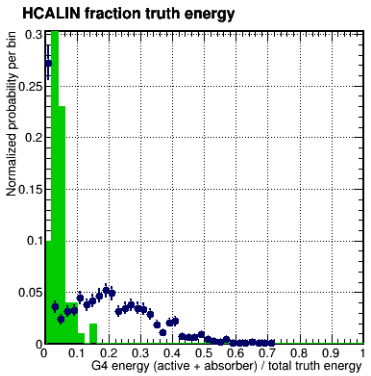


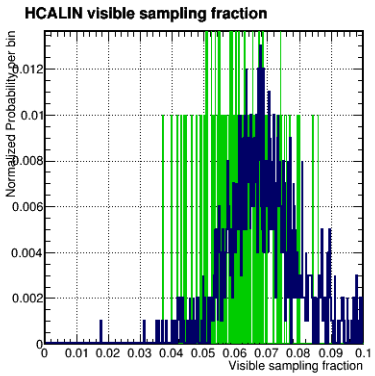


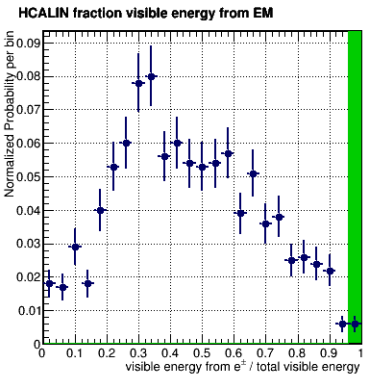






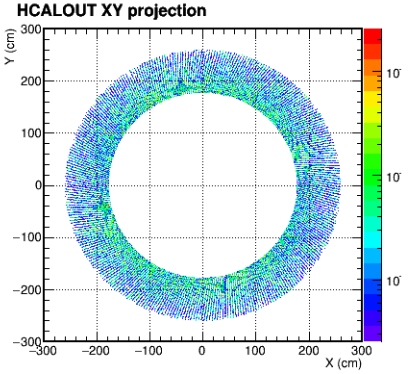


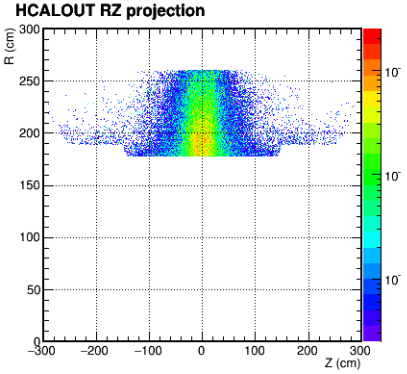


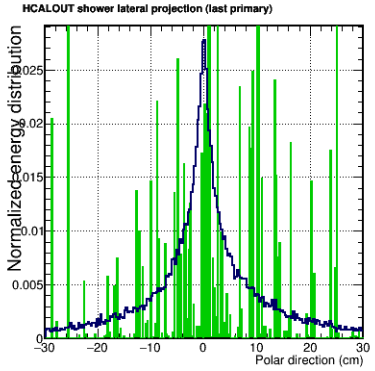


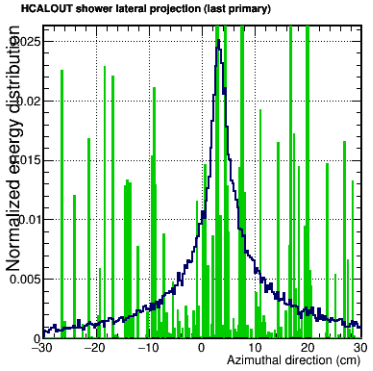
HCALOUT

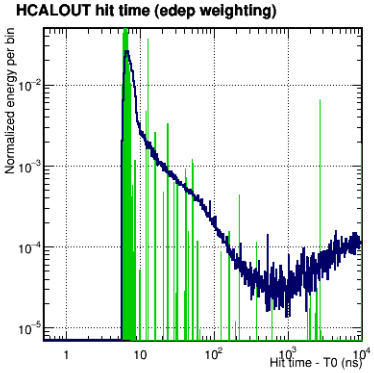
- 24GeV pi- simulation in inspection
- 24GeV e- simulation as reference

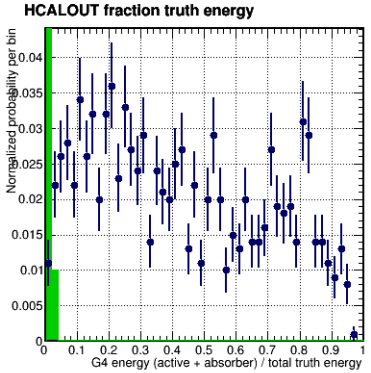


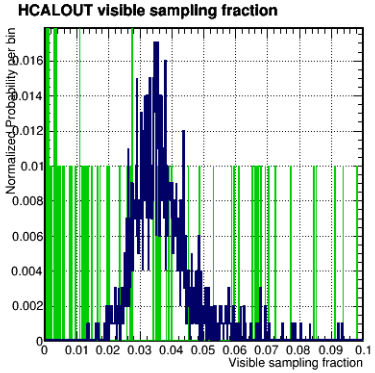


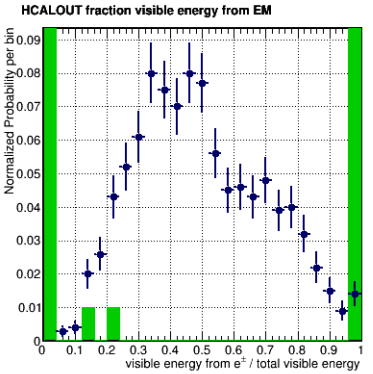












HCALIN

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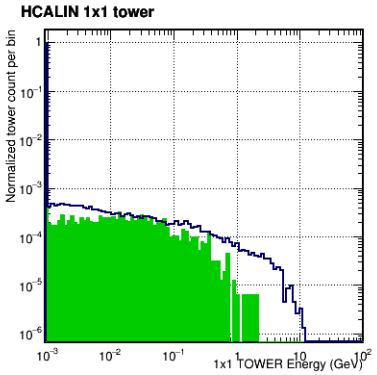
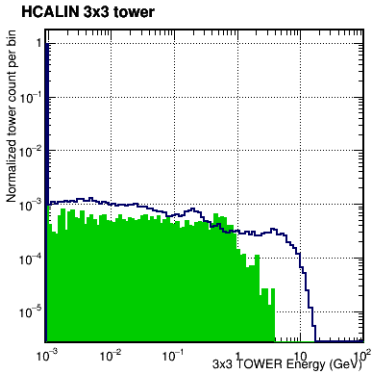
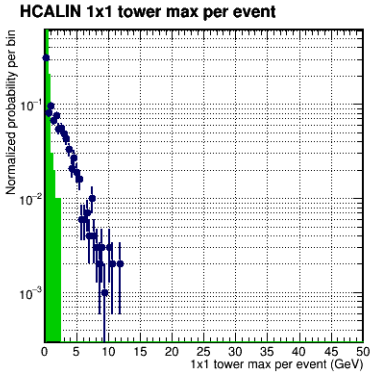
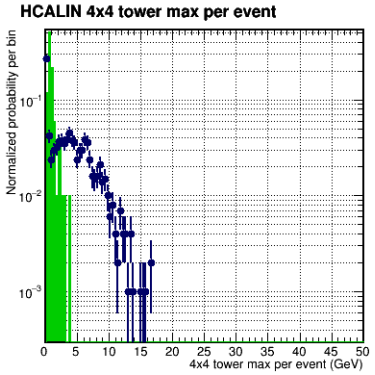
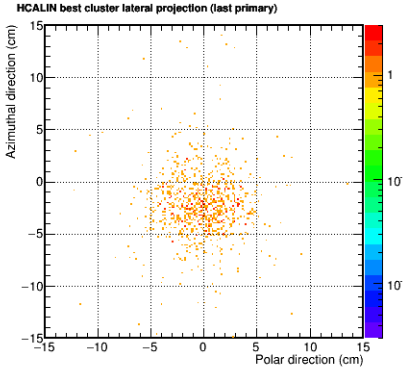
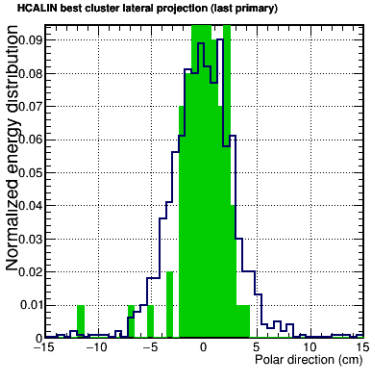


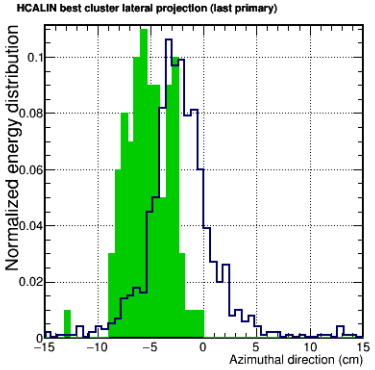


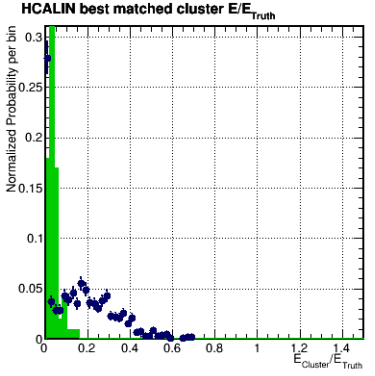


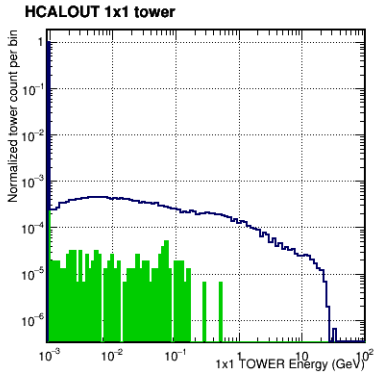
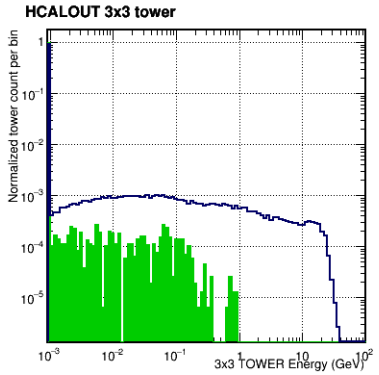
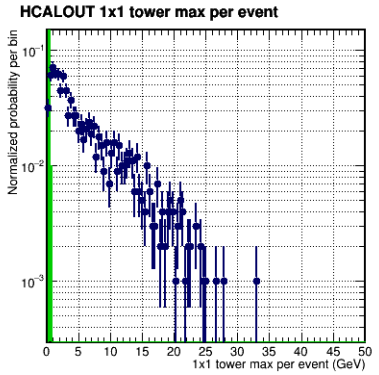
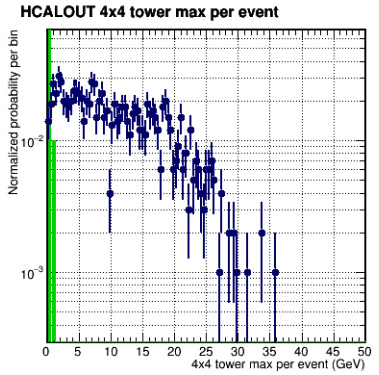
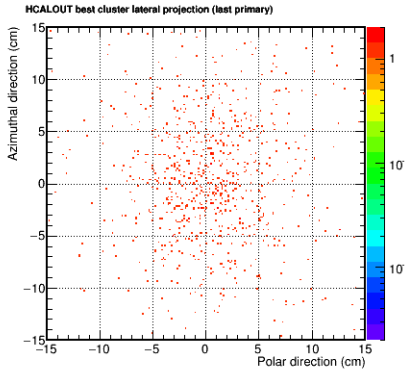
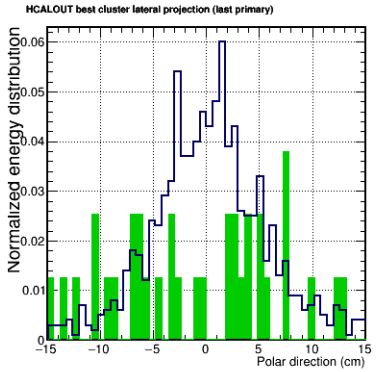
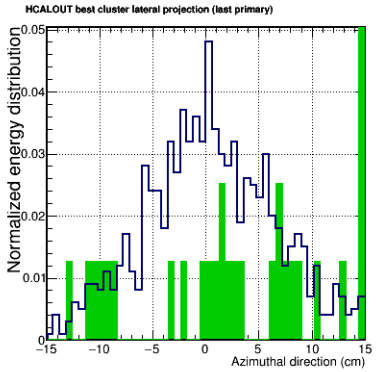
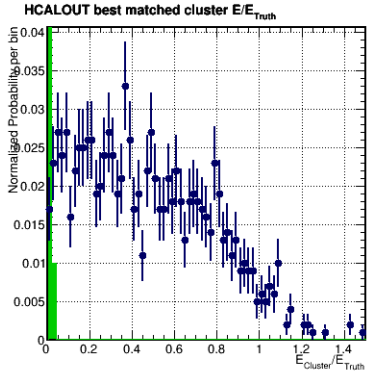










HCALOUT

- 24GeV pi- simulation in inspection
- 24GeV e- simulation as reference